THE INVENTORS CLAIM:

1. Sprinkler apparatus comprising:

a base adapted for attachment to a sprinkler assembly,

a nozzle mounted on said base,

means to supply liquid under pressure to the nozzle,

said nozzle having a passage adapted to provide a liquid jet of a generally predetermined cross-sectional configuration, and

means defining a reflector surface disposed to be impacted by said liquid output jet from the nozzle,

said reflector surface being adapted and contoured to reflect said liquid jet in a spray to an area to be sprayed, said spray being of generally predetermined cross-sectional configuration generally similar to the cross-sectional configuration of said liquid jet,

whereby a spray pattern of a generally predetermined cross-sectional configuration from the reflector is applied to the area to be sprayed.

2. Apparatus according to Claim 1, wherein said nozzle and reflector surface are defined on a unitary nozzle device that is force-fitted into the base.

3. Apparatus according to Claim 2, wherein said nozzle device defining the nozzle and reflector surface is adapted by edge portions thereof to be snapped-into opposed slots in an upper portion of the base.

4. Apparatus according to Claim 1, wherein:

the reflector surface is contoured and adapted to split said liquid jet to cause the reflected spray to be evenly distributed on both sides of a predetermined area to be sprayed.

5. Apparatus according to Claim 1, wherein the surface configuration of the reflector is convex in two directions substantially at right angles to each other.

6. Apparatus according to Claim 1, wherein:

variations in the surface of the generally convex reflector surrace reflect respective portions of spray at respective portions of a predetermined spray pattern to respective portions of an area to be sprayed.

7. Apparatus according to Claim 1, wherein said reflector surface is on a flexible metal member mounted on said base, and further comprising:

a threaded member threadedly mounted in the base and positioned to engage the reflector and alter its configuration by rotation of the threaded member.

8. Sprinkler apparatus comprising:

a base adapted for attachment to a sprinkler assembly,

a nozzle mounted on said base,

said nozzle having a passage adapted to provide a liquid jet of a generally rectilinear cross-sectional configuration,

means to supply liquid under pressure to the nozzle,

a reflector surface disposed to be impacted by said liquid output jet from the nozzle,

said nozzle and reflector surface being defined on a unitary nozzle device which is force-fitted into the base,

said reflector surface being adapted and contoured to reflect said liquid jet in a spray to an area to be sprayed, said spray being of cross-sectional configuration generally similar to the rectilinear cross-sectional configuration of said liquid jet,

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8. (continued)

a generally convex reflector surface having variations in the surface to reflect respective portions of spray at respective inclinations from the reflector to define respective portions of a predetermined spray pattern to respective portions of an area to be sprayed,

whereby a spray pattern of a predetermined rectilinear cross-sectional configuration from the reflector is applied to the area to be sprayed.

9. Apparatus according to Claim 8, wherein the surface configuration of the reflector is generally convex in two directions substantially at right angles to each other.

10. Apparatus according to Claim 9, wherein variations in the general convex contour of the reflector surface to effect respective inclinations of spray portions, may be determined (a) emperically, (b) preferably by utilization of computer equipment and insertion thereinto of data including geometric relations of parts, angles, and dimensions.

11. Apparatus according to Claim 8, wherein the reflector surface is defined on a flexible member on the apparatus, and further including:

a threaded member in an opening in the apparatus for adjustment of the configuration of the reflector.

12. Apparatus according to Claim 8, wherein a step shoulder is defined in a wall portion of the nozzle apparatus adjacent an outlet end of the nozzle passage to deflect the liquid jet from the innermost portion of the reflector surface to prevent interference by inaccurate spray from an innermost reflector surface portion.

13. Apparatus according to Claim 8, wherein the nozzle and reflector surface are defined on a unitary nozzle device having portions thereof adapted to be snapped into an upper portion of the base to mount the nozzle device on the base.

14. Sprinkler apparatus comprising:

a base adapted for attachment to a sprinkler and for liquid passage therethrough.

a unitary nozzle device mounted on said base,

said unitary nozzle device comprising an integrally formed nozzle passage and an integral reflector surface disposed in spaced-apart confronting relation, said reflector surface being disposed to be impacted by a liquid jet from the nozzle passage,

said integral nozzle device providing dimensional accuracy as between the nozzle and the reflector surface to enable accurate performance of the nozzle device and accurate repeatability in manufacture of the device,

said nozzle passage being adapted to provide a liquid jet of a generally predetermined cross-sectional configuration, and

said reflector surface being contoured and adapted to reflect said liquid jet in a spray to an area having a cross-sectional configuration to be sprayed which is

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14. (continued)

generally similar in cross-sectional configuration to that of said liquid jet,

whereby a spray pattern of a substantially predetermined cross-sectional configuration is applied to an area to be sprayed.

15. Apparatus according to Claim 14, wherein the nozzle is adapted and contoured to reflect the liquid jet from the nozzle in a reflected spray pattern and a cross-sectional configuration generally similar to that of the liquid jet from the nozzle.

16. Apparatus according to Claim 14, wherein a step shoulder is defined in a wall portion of the nozzle device adjacent an outlet end of the nozzle passage to deflect the liquid jet from the innermost portion of the reflector surface to prevent interference by inaccurate spray from an innermost reflector surface portion.

17. Apparatus according to Claim 14, wherein the nozzle and reflector surface are defined, is adapted for edge portions thereof to be snapped into opposed slots in an upper portion of the base to mount the nozzle device on the base.

18. Apparatus according to Claim 14, wherein the reflector surface is defined on a flexible member on the apparatus, and further including:

a threaded member in an opening in the apparatus for adjustment of the configuration of the reflector.

19. Apparatus according to Claim 14, wherein said nozzle device is force-fitted into an opening in the base to mount the device on the base in sealing engagement therewith.

20. Apparatus according to Claim 14, wherein a generally circular lower portion of the nozzle device is force-fitted into a circular opening in the base, and wherein an interior wall of the base provides a wall of the nozzle passage.

21. Apparatus according to Claim 14, wherein variations in the generally convex contour of the reflector surface to effect respective inclinations of spray portions, may be determined (a) emperically, (b) preferably by utilization of computer equipment and insertion thereinto of data including geometric relations of parts, angles, and dimensions.

22. Apparatus according to Claim 14, and further comprising:

a plurality of devices according to Claim 14 disposed in a plurality of respective openings in a multiple sprinkler assembly wherein the plurality of nozzles and reflector surfaces cooperate to provide an overall composite predetermined spray area pattern.